

# Manasbir Bagri

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in/manasbir

## EDUCATION

### University of Waterloo

Expected 2028

*Bachelors of Mathematics (BMath), Honours Mathematics Co-op*

- Undergraduate Research Assistant: Implementing and testing novel blockchain L2 infrastructure in Solidity.

## EXPERIENCE

### Software Engineering Intern — TypeScript (Next.js), Python (Gunicorn, Agents-SDK)

2025

*PoplarML (YC W23)*

*Ottawa, ON*

- Engineered resilient web scrapers for multiple procurement platforms for sourcing RFPs and amendments in TypeScript.
- Integrated product with Microsoft Teams for SharePoint file indexing, RFP feed, document drafting, and chat interface.
- Built AI workflow visualizer and planner dashboard in Next.js, allowing users to utilize the generalized workflow engine.

### Software Engineering Intern — TypeScript (NestJS, Next.js), Python

2025

*Vigil Labs*

*Toronto, ON*

- Built performant real-time data pipelines for Hyperliquid and Solana DEXs in TypeScript and Python with Temporal, including custom raw transaction decoding and **supporting 1000+ transactions per second**.
- Created the trading copilot, a research terminal and data analytics tool, helping traders utilize data for real time events and analytics, uncovering actionable and profitable trading opportunities.
- Evaluated and benchmarked semantic search strategies to improve trading copilot tooling with more accurate results.
- Found bottlenecks in testing suite via benchmarking and reduced start up times by **5 seconds** with more performant code and lazy loading, enhancing the development/iteration process.

### Software Engineering Intern/MEV — Rust, TypeScript, Python, Solidity

2023, 2024

*Protecc Labs*

*Remote*

- Ran a desk **earning \$100,000+** implementing and optimizing novel MEV (Maximal Extractable Value) strategies on EVM chains with Rust, TypeScript, and Python.
- **Improved MEV algorithm success rate to 100%** by parallelizing data processing and tasks, backrunning oracle/competitor transactions, and refactoring memory management.
- **Managed \$200,000+** by implementing market maker functionality for NFT marketplaces on Avalanche in TypeScript.
- **Created \$1,000,000+ in volume** for client tokens with Rust and TypeScript algorithms on Solana and Ethereum.

### Contract Developer — Rust, TypeScript (Next.js, React, Express, Tailwind), Solidity

2022 - Present

*(Between Employment)*

*Remote*

- **Developed a perpetual futures protocol with \$1.2+ million TVL** on Arbitrum using Solidity and TypeScript.
- **Secured 50+ first bids** on the Foundation NFT marketplace by creating and optimizing strategies in TypeScript.
- Designed and built landing pages for school and online communities using Next.js, Tailwind, and Figma.
- Rescued client's Ethereum funds by developing a real-time wallet monitoring and funds liquidation script in Rust.

### Software Engineering Intern — TypeScript, Solidity

2022

*You are Matrix*

*Remote*

- Implemented core logic and character functionality for turn-based blockchain games in Solidity.
- **Reduced user transaction fees by 10%+** by optimizing game functionality and minimizing storage and memory use.
- Built a comprehensive testing suite using TypeScript, reducing bugs and streamlining the development/iteration process.

## PROJECTS (HYPERLINKED)

### Assembly Square Root Algorithm Optimization— Rust, Huff

- Implemented and optimized the integer square root algorithm in Huff, an EVM assembly programming language.
- Upstreamed implementation to Huffmate, the Huff standard library with over **400 GitHub stars**.

### Watccha, Ethereum Wallet Tracker— Rust

- Modular Ethereum real-time event and wallet monitoring tool. Generalized calldata decoding powered by ChatGPT and notifications with the ability to execute on-chain responses to events.

### Open Classroom Finder— Rust, SQL

- UWaterloo open classroom Discord bot built with a custom Discord SDK and Cloudflare D1 on Cloudflare Workers.

## TECHNICAL SKILLS

Rust, TypeScript/Javascript (TS/JS) (Node, NestJS, React, NextJS, React Native, Express), Python (Flask, FastAPI, Gunicorn, Agents-SDK), C, C++, Solidity (Foundry), SQL & No-SQL Databases (Supabase, Firebase, PostgreSQL), Redis, HTML/CSS, Docker, Git, Unix, Figma